# Death Clearance

## In's and Outs of Death Clearance

Bobbi Jo Matt, BS RHIT CTR

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# Objectives

- Definition / Benefits
- NAACCR Death Clearance Manual
- Tumor Comparison
- Test Study
- Questions

# Definition

- The process of matching registered deaths in a population against the central cancer registry database in order to achieve:
  1. Ascertainment of death information for cases in the registry
  2. Identification of all deaths with a reportable condition mentioned as a cause of death that are not found in the registry database

    - Year of deaths corresponds to cancer incidence year being completed

# Benefits

- Enhance data quality and usefulness with vital status and other common information on both DC and registry
- Identify potential missed cases
- Clear up Non-Histologically confirmed cases
- Update Non-Specific primary sites

# NAACCR Death Clearance Manual

- Updated December 2014 for 2013 Deaths
- Additions to Minimum requirements
- Best practices for each requirement
- Scenarios with resolution for practical use
- Glossary of terms for consistency in interpretation

# NAACCR Death Clearance Manual cont.

- Tumor Comparison Guidelines – Appendix E
  - New section
  - Took parts from Chapter 3 and 4
  - Mapping Table included
  - Automated process

# Abbreviations

- Death Certificate **(DC)** – the Morality Record
- Cause of Death **(COD)** – ICD-10 Codes listing the Underlying or contributing causes of death
- Database **(DB)** – The Registry's database
- Follow-back **(FB)** – The process of sending a query to either a facility (hospital) or a physician

# Points to Remember

# Points to Remember cont.

- These guidelines should apply to Death Clearance **only**
- Less stringent criteria is used
- Timing and disease status not factors
  - **Exception: C809**

# Points to Remember cont.

- DC's are most likely generic
  - Site codes: Cxx.**9**
  - Histology Codes:
    - Cancer – 8000/3
    - Lymphoma – 9590/3
    - Leukemia – 9800/3

# Points to Remember cont.

- Skin as two different ICD-10 codes
  - C44: Malignant neoplasms of skin
    - Basal/Squamous cell
    - Skin Cancer, NOS
  - C43: Malignant Melanoma of skin
    - Melanoma
    - Skin Cancer, NOS

# Points to Remember cont.

- Where on the DC is the COD
  - Part 1:
    - Underlying COD
    - Condition most likely resulted in death
  - Part 2:
    - Conditions that patient has had and **MAY** have contributed to death
      - History of
      - Conditions that may be present at death

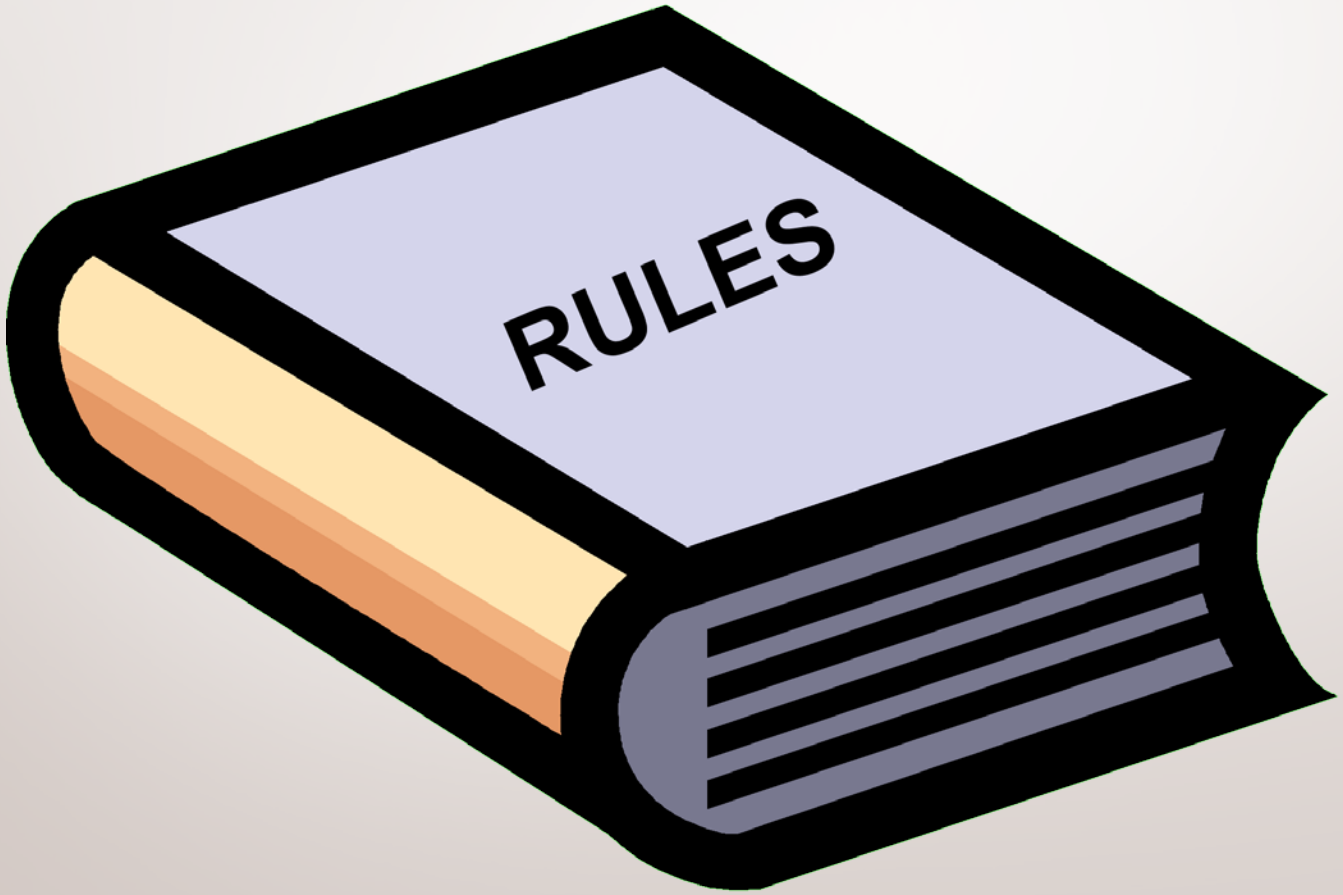
# Points to Remember cont.

- Time Interval on DC
  - Can be used to estimate Dx Date
  - Might help in matching DC to Tumor on DB
    - 2014 DC: Underlying COD: Lung cancer – 15 yrs
    - DB: Lung cancer – DX date 1995

# Points to Remember cont.

- Multiple reportable COD codes
  - Primary vs Secondary ICD-10 Codes
    - **Primary**: Lung **(C34)**, Breast **(C50)**
    - **Secondary**:
      - Lymph nodes: **C77**
      - Respiratory and Digestive: **C78**
      - Other sites: **C79**
  - Ignore secondary COD codes if a Primary site is listed

# Death Clearance
# Tumor Comparison



# Guideline 1

- If the primary site in the registry and the COD on the DC are a **Direct Match** – consider this a match – No FB is required.

*Example: Patient had a Breast primary (C50.4) diagnosed in 2000 and died in 2014 with (C50.9) as a COD code.*

# Guideline 2

- If the primary site in the registry and the COD on the DC are a **Mapping Match** – consider this a match – No FB is required.

# Mapping Table

- The guidelines are to be used for Tumor Comparison in Death Clearance **ONLY**
- Solid Tumors **ONLY**
- The only timing rule applied to the table deals with DC's with **C809** as COD
  - Death date and Dx date are **within a 5-year** time span

# Mapping Table cont.

| Death Certificate Value | Registry's DB Value |
|---|---|
| ICD-0 Code | ICD-0 Code |
| C155 | C160 |
| C159 | C160 |
| C16 | C260 |
| | C268 |
| | C269 |
| C160 | C155 |
| | C159 |
| C17 | C26 |
| C171 | C189 |
| C18 | C26 |
| C187 | C199 |
| | C209 |

| Death Certificate Value | Registry's DB Value |
|---|---|
| C189 | C171 |
| | C199 |
| | C209 |
| C199 | C187 |
| | C189 |
| | C209 |
| | C26 |
| C209 | C187 |
| | C189 |
| | C199 |
| | C21 |
| | C26 |

# Guideline 1 & 2
# Exception

- Behavior
  - In situ vs. Invasive
    - If the only invasive COD on the DC matches an in situ tumor on the DB – FB should be done
    - Common sites: Bladder and Cervix

# Case Scenario

- 2014 Death - COD: C66 – 3 yrs
  - Coded to C669 – 8000/3
- DB: C670 – 8130/2 (2011)
- A mapping match and time frame matches

**What would you do?**

- Only COD listed – behavior does not match

**FB should be done**

# Case Scenario

- COD: I251, (**C679**, J448, I802, F179)
  - Converted to ICD-O - C679 – 8000/3
- DB: C670 – 8130/2 (92)
- A direct match – behavior's don't match

**What would you do?**

- As COD is listed in Part 2 – assume hx of

**Match – No FB required**

# Guideline 3

- There are some Histology-Specific based matches where the sites doesn't match but the **Histology's match** – consider this a match – <u>No FB is required</u>

| Histology Based Mapping | | | |
|---|---|---|---|
| | ICD-10 | Histology Code | ICD-O-3 |
| Mesothelioma | C45 | 905 | All sites |
| Kaposi Sarcoma | C46 | 9140 | All sites |
| Melanoma | C43 | 872-879 | All sites |

# Case Scenario

- COD: I219, I10, (R54, **C439**)
- DB: C541 (01), C420 (08) and C519 – 8721 (13)

**What would you do?**

- Sites don't match – but histology's match

**Match – No FB required**

# Guideline 4

- Hematopoietic and Lymphoid Tumors only
- Convert the ICD-10 COD primary site/histology codes to ICD-O-3 site/histology codes
- **4 Main** Histology Categories:
  - Non-Hodgkin Lymphoma
  - Hodgkin Lymphoma
  - Leukemia
  - Myeloproliferative disorders/Myelodysplastic syndromes

# Guideline 4 cont.

- All Non-Hodgkin Lymphoma codes
  - Range 9590-9597
  - Range 9670-9759
- Hodgkin Lymphoma
  - Range 9650-9669

# Guideline 4 cont.

- Leukemia codes
  - Range 9800-9948

- **Exception:** CLL (9823) vs SLL (9670)

# Guideline 4 cont.

- Myeloproliferative disorders and Myelodysplastic syndromes
  - Range 9950-9992

***Example 1:*** *COD (9989) vs DB (9980)*

*Heme DB – indicates same primary*

***No FB required***

***Example 2:*** *COD (9986) vs DB (9975)*

*Heme DB – indicates new primary*

***FB required***

# Guideline 5

- Apply to those that don't meet Guideline 1-4
- Minimal changes/updates
- Common Metastatic Sites
  - Lung, Liver, Bone, Brain
- When the guideline states '**No FB required'** – the DC can be matched without obtaining further information

# Guideline 5A and 5B

A) When the registry cannot accurately make the determination with available information – **FB is required**

B) If the primary tumor in the registry and the COD on the DC clearly represent 2 different primaries – **FB is required**

*Example: Patient with colon cancer in registry's DB – DC lists Leukemia as COD*

# Guideline 5C

If the primary tumor in the registry is Unknown **(C809)** and the COD is a Common Metastatic Site – **No FB is required**

# Guideline 5D

If the primary tumor in the registry is Unknown **(C809)** and the COD is **NOT** a Common Metastatic Site (and additional information from the registry provides no help) – **FB is required**

# Guideline 5E

If the primary tumor in the registry is a **known primary** and the COD is a Common Metastatic Site, consider both to represent the same tumor without FB **ONLY** if the metastatic site is commonly associated with the primary in the registry

*Example: Pt with Prostate Ca and the DC states Bone Ca – Match –* ***No FB is required***

*Example: Pt with Bladder CA and the DC states Brain, C719 –* ***FB is required***

# Case Scenario

COD: **C349**, (G20, F179) – 2014 Death

DB: C672 – 8120/34 (2008)

**What would you do?**

Apply the guideline? You could – **BUT….**

DC Text states: Left upper lung cancer widely metastatic – 2 years

**FB should be done**

# Case Scenario

- COD: J449, F179, (**C419**, F179)
- DB: Rt Breast (94), Endometrium (03) and Lt Breast (14)

**What would you do?**

- In text from 2014 primary: "vertebral body – susp for mets" and case coded with Bone mets

**Match – No FB needed**

# Guideline 5F

If the primary tumor in the registry is a known site and the COD is Unknown (C809) **AND** the time span is over 5 years (and additional information from the registry provides no help) – **FB is required**

# Guideline 5G

If the primary in the registry is not histologically confirmed and there is no mention on the DC of cancer – It's **encouraged** to FB to determine if the diagnosis was later ruled out

*Example: Pt diagnosed with Suspicious Lung Cancer in 2009. DC has COD listed as Pneumonia – After FB it was determined that the suspected mass was later ruled out – Lung cancer removed from registry DB.*

# Death Clearance
# The Process

# Timing

- Wait until the Final Mortality file is complete
- Have the majority of the Death year's cases complete
  - Example: 2014 Death Year
    - Late summer 2015 - Final Iowa Mortality file
    - December 2015/ January 2016 – Begin review and FB
    - October 31st, 2016 – Death Clearance complete – any Death Certificate Only (DCO) cases applied to registry's database

# Death Clearance: Categories

- Non-Match - Patient not in Registry database
  - Non reportable death certificate
  - Reportable death certificate
- Patient-Match - Patient in Registry database
  - Non reportable death certificate – Patient level match
  - Reportable death certificate
    - Tumor Match
    - Non Tumor Match

# Non – Matches

- Non-Matches complete when:
  - DC's are used to create DCO or MDO's
  - An abstract is submitted as a missed case
  - DC made not reportable
    - History of
    - Not reportable cancer

# Patient - Matches

- Referred to as 'Tumor Comparison'
  - The process of comparing the registry's tumors to the reportable condition coded on the mortality file (DC file)
- Majority of Patient-Match's can be automatically linked at the Tumor level
- Manual review of the Registry's records is done prior to FB sent out

# Patient – Match cont.

- Patient – Match complete when:
  - DC's are linked at the Tumor level
    - Create DCO or MDO's
    - An abstract is submitted as a missed case
    - Manually closed
  - DC made not reportable and linked only at Patient level

# Challenges

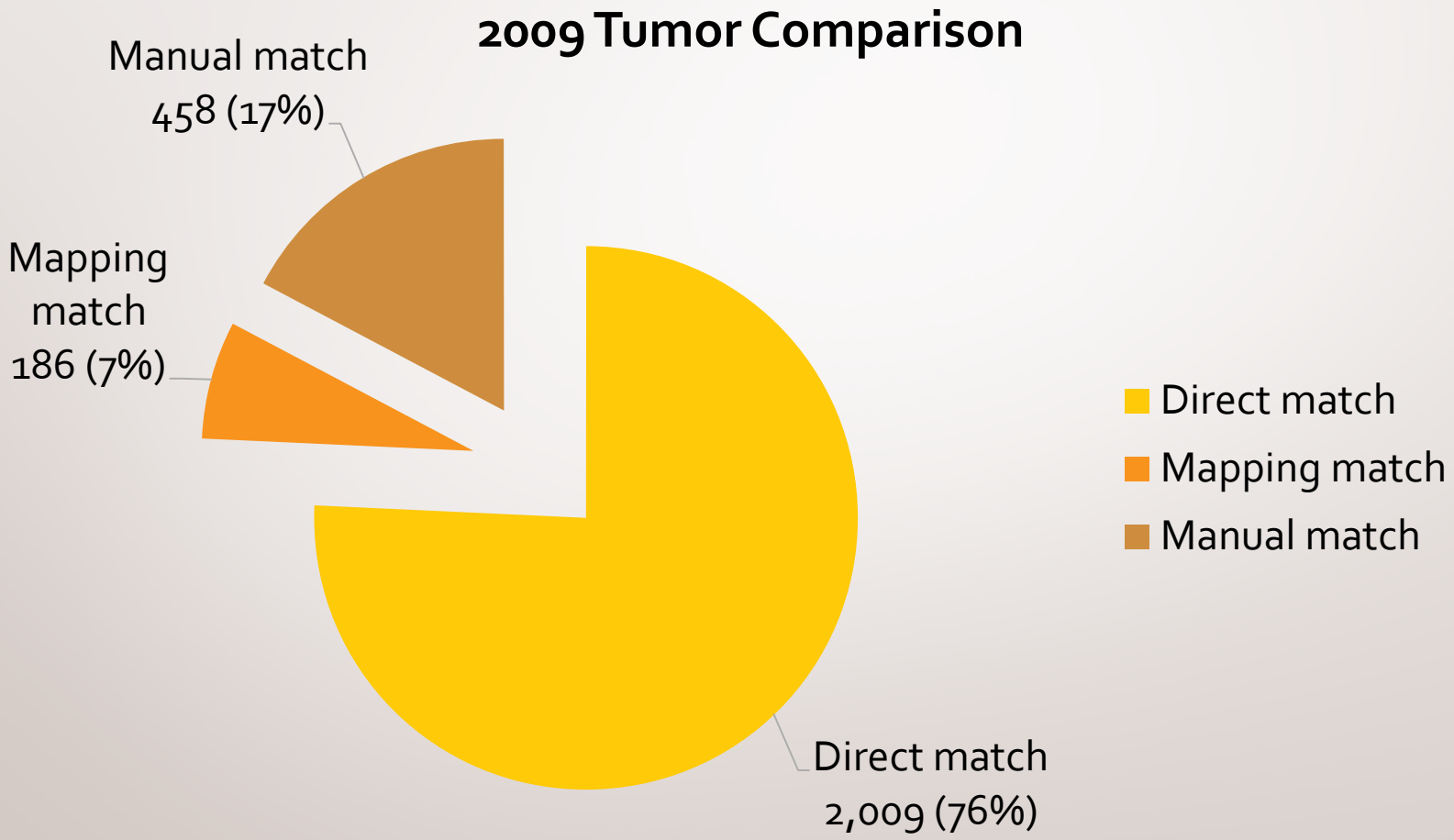
- Working on Death Year 2 years in the past
  - Physicians have retired or moved
  - Records are no longer available
- Increasing number of non hospital deaths
  - Hospice
  - Care centers
- FB returns with little or no info
  - "Patient died"
  - "Not my patient"

# 2009 Test Study

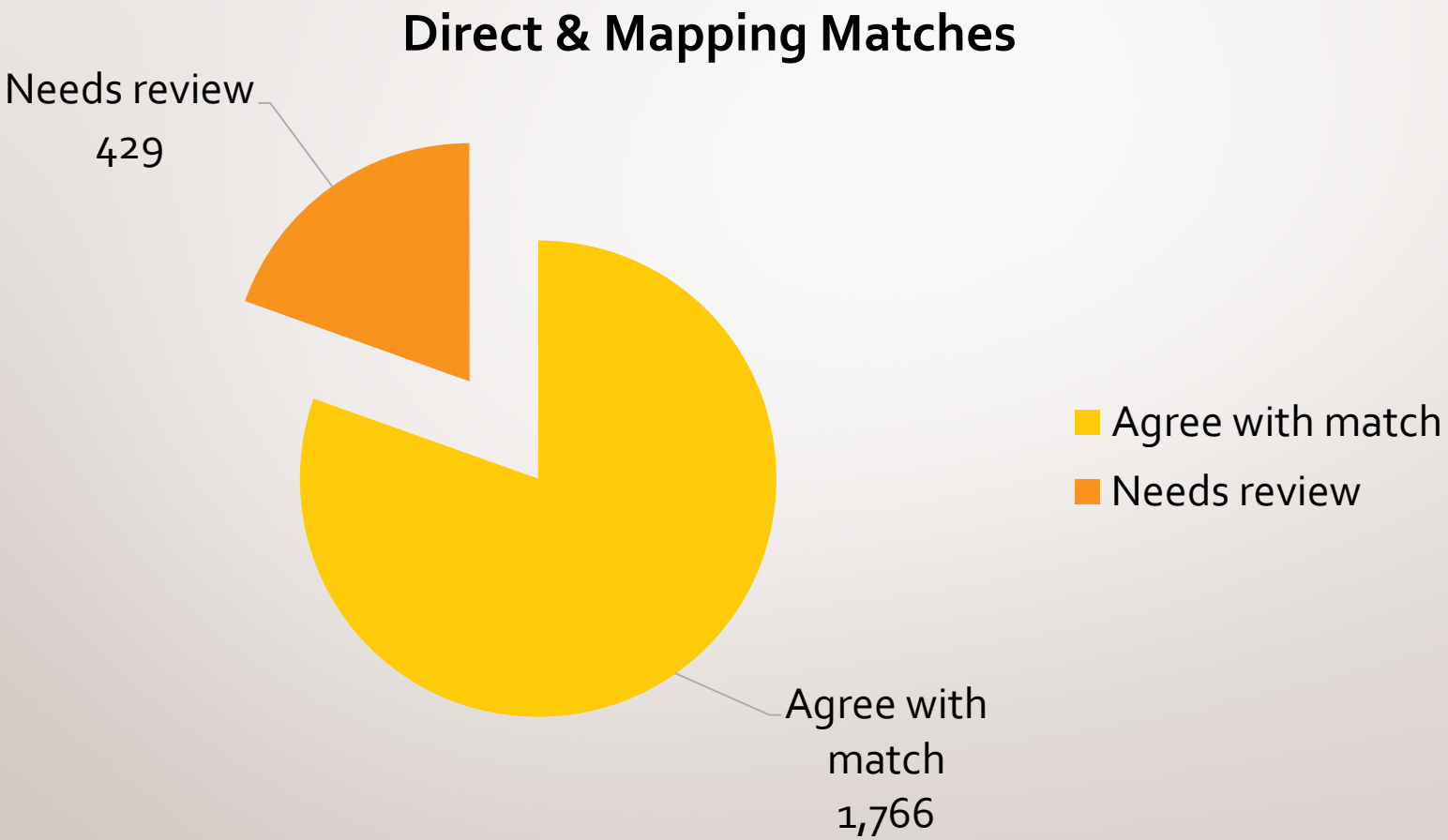
# 2009 Death Clearance Test Study

- Test out the proposed new guidelines – mainly those that could be automated
- 2,653 cases in the study
  - Matched at Patient level only
  - Reportable cancer on DC
  - Divided into 3 categories
    - Direct Matches
    - Mapping Matches
    - Manual Matches (not a Direct or Mapping match)

# 2009 Test Study



# 2009 Test Study



# 2009 Test Study

- Direct and mapping cases reviewed – 429
  - Matched after reviewed – 365 **(85%)**
  - Follow-back needed – 64 **(15%)**

- Follow-back cases done – 64
  - New case – 8 **(12%)**
  - No new case – 56 **(88%)**

# 2009 Test Study

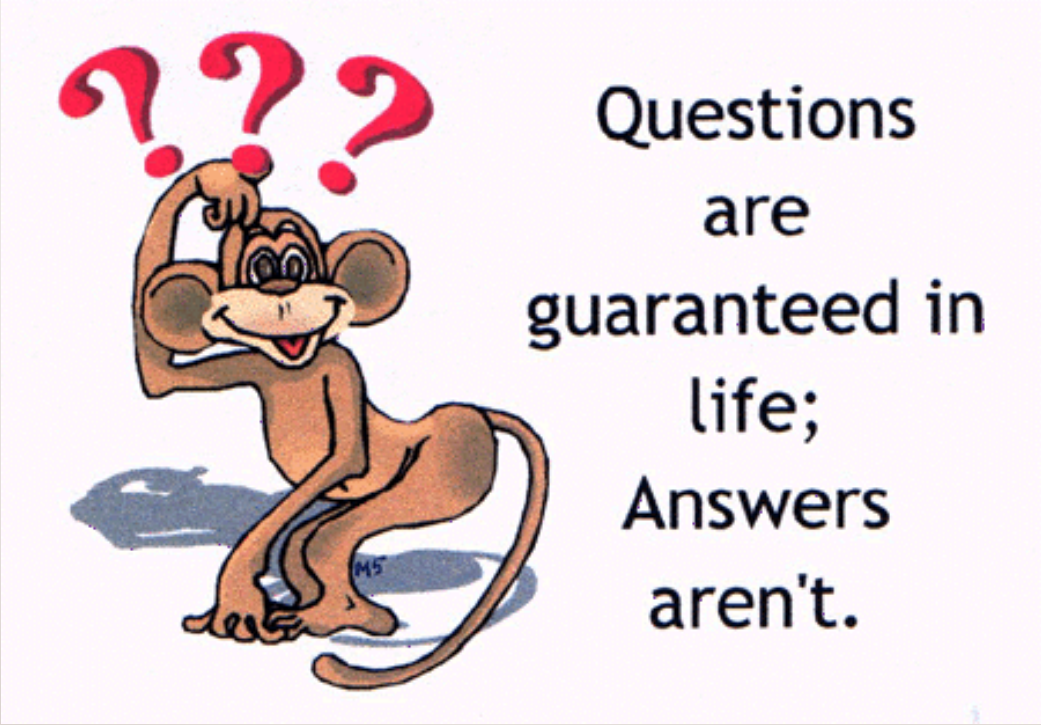
- Total Direct and Mapping cases – 2,195
  - **New cases – 8 (0.36%)**
  - No new case – 2,187 (99.64%)

- Manual Reviewed cases – 458
  - **New case – 103 (22.5%)**
  - No new case – 355 (77.5%)

# 2009 Test Study - Conclusion

- Tumor Comparison should be less labor intensive with automation
- Potentially missed cases should be very minimal

# Questions!




bobbi-matt@uiowa.edu